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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,881	08/31/2001	Ping Li	021238-478	9479

7590 08/17/2004  
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Alexandria, VA 22313-1404

EXAMINER
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WALLS, DIONNE A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b>	Application No. 09/942,881	Applicant(s) LI ET AL.	
	Examiner Dionne A. Walls	Art Unit 1731	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 29 July 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☒ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

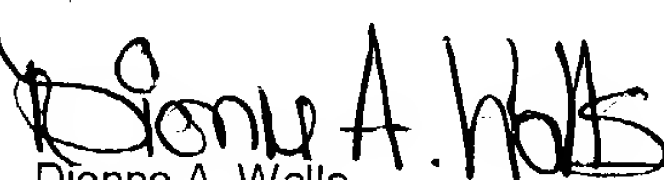
Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: 43-74

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☒ Other: See Continuation Sheet

  
 Dionne A. Walls  
 Primary Examiner  
 Art Unit: 1731

Continuation of 5. does NOT place the application in condition for allowance because: it is insufficient to overcome the rejection of claims 43-74 based upon the Stuetz reference as set forth in the last Office action. The reason is because (1) the Examiner is NOT convinced that one having ordinary skill in the art would NOT have been motivated to use nanoparticle-sized iron oxide powder in the cigarette filler of Stuetz. Specifically, the Examiner still believes, as stated in the Final Rejection, that it would have been reasonable for one having ordinary skill in the art to have fabricated an ultra-fine iron-oxide catalyst based on the statement in Stuetz indicating that the efficiency of toxic material reduction in smoke delivered by the catalyst INCREASES as the particle size of the catalyst DECREASES. Examples of the efficiency of nanoparticle-sized catalysts (noted by the terms cryomilled and colloidal) in the reduction of toxic material from smoke were presented in Stuetz. While the Examiner admits that said examples were directed to manganese oxide, there is NO indication or suggestion that iron oxide (also a preferred catalyst) would not be just as effective, for the same function, on a nanoscale size. Further, while Applicant asserts "unexpected results" of using iron oxide nanoparticles in cigarette filler, it doesn't proceed to compare the supposed superior effectiveness of iron oxide nanoparticles (as claimed) OVER iron oxide cryomilled/colloidal particles (as suggested in Stuetz). Instead, Applicant proceeds to compare "apples to oranges" by comparing manganese oxide to iron oxide/iron oxide-alumina structures. This comparison does not address to essence of the point raised in the rejection, i.e. that iron oxide colloidal particles necessarily correspond to the claimed iron oxide nanoparticles. (It is noted that Applicant, in its Response, does not appear to contradict this point). The Examiner was NOT asserting that manganese oxide colloidal particles correspond to the claimed iron oxide nanoparticles. Further, Applicant discusses iron oxide nanoparticles with an average particle size of 3 nm; however, this is not commensurate in scope with the claimed range of iron oxide nanometers (2) Applicant has not provided sufficient proof that iron oxide particles were not commercially available prior to the early 1990's. In fact, the Examiner does not believe that this assertion is accurate based on the disclosure of the Metzger et al reference - which is cited for Applicant's interest. This reference, which was published in 1974, indicated that nanoparticle-sized iron oxide was known and, obviously, commercially available for use.

Continuation of 10. Other: Based on the above, the Final Rejection mailed on April 13, 2004, will be maintained..